TIPS IN IDENTIFYING IDEAL WILD RICE HABITAT

I. INTRODUCTION

The success of a new wild rice grower is dependent primarily on his ability to choose the site where he intends to grow the crop.

In the last five (5) years, Saskatchewan growers have been faced with the difficulty of identifying the waterbody or section of the waterbody which will support a good crop. This situation is not totally surprising, because wild rice farming in Saskatchewan is still in its early stage and production information, such as habitat identification is just being scientifically studied.

The foregoing tips on habitat identification is based on early results of current research as well as experiences gained during the previous years.

II. MAJOR FACTORS

The major factors to consider in choosing a waterbody for wild rice production include the following:

1. Ideal general conditions of the waterbody.
2. Water depth.
3. Water quality.
4. Type of sediment.
5. Shelter.

III. IDEAL GENERAL CONDITIONS OF THE WATERBODY

The things to look at under this category include:

1. Wide, slow-moving streams.
2. Lake bays where a stream flows in, with sufficient drainage outlet.
3. In bigger lakes, bays that are sufficiently sheltered, but where circulation or flow of water is significant to stir up the sediment.

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IV. WATER DEPTH

1. Water depth is very critical and should be looked very closely preferable in late summer.
2. The ideal water depth should be between 60 and 120 centimetres (24 and 48 inches).
3. In deeper water, the plants have fewer tillers and lesser seeds.
4. Shallow water creates harvesting problems.
5. The depth changes during summer are also very important in that is is critical in the early development (floating stage) and growth of the crop and during the harvest time. One way to determine the extent of the depth changes is by checking the shorelines where high water marks can be found on rocks and other plants such as cattails.

V. WATER QUALITY

1. Non-muddy water with a pH of 7.5-8.0 and conductivity of 150-200 u^S/cm is excellent. The best way to judge water quality without being able to measure the pH and conductivity is by the growth of other water plants. There may be a light growth of weeds such as pondweed or milfoil, but heavy growth of water lilies is a well known sign of good conditions.
2. Avoid open stands of bulrushes.
3. The clear, slightly reddish water draining from bogs is not suitable.

VI. TYPE OF SEDIMENT

1. An organic sediment (muck soil) of about 70 centimetres (28 inches) deep is ideal. Twenty centimetres (8 inches) deep will do. Many sites will have more than 100 centimetres (40 inches).
2. It is important that the sediment has sufficient supply of oxygen to allow the development of the roots.
3. Avoid muck with a strong "rotten egg" smell which may contain too much sulfur compounds.
4. Very loose ooze (mud) that does not stick to a paddle or pole should also be avoided.
5. Bare sand, gravel or rock should be avoided.

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VII. SHELTER

1. Winds and waves will uproot the wild rice plant.
2. Winds and waves will increase shattering losses of mature wild rice grains.
3. The larger the lake and the straighter the shoreline, the more shelter is needed.
4. If water is deeper than 120 centimetres (48 inches) even more shelter is required.
5. There should be very little direct exposure to straight stretches of more than 1,500 metres (1,650 yards) of deep open water.

AVERAGE VALUES FOR SELECTED HABITAT CONDITIONS IN NORTHERN SASKATCHEWAN

GROWING AREA	Depth	pH	Water Conductivity	Temperature	Sediment Depth	pH
East	111	7.3	102	18	63	6.3
Central	109	7.8	143	21	69	6.4
West	60	7.9	190	20	67	6.5
HABITAT TYPE						
Lakes	102	7.7	138	20	67	6.5
Streams	81	7.7	154	19	66	6.4
On Shield	120	7.2	73	20	66	6.2
Off Shield	79	7.9	181	20	66	6.5

NOTE: For more information on wild rice habitat and wild rice production, please refer to the Saskatchewan Department of Agriculture brochure on "Wild Rice Production in Saskatchewan".

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